

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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GREAT LAKES BUSINESS TRUST and GREAT	:	
LAKES DREDGE & DOCK CO., LLC,	:	
	:	08 Civ. 941 (KBF)
Plaintiffs,	:	
	:	<u>AMENDED OPINION &</u>
-v-	:	<u>ORDER</u>
	:	
M/T ORANGE SUN, her engines, sails,	:	
boilers, tackle, etc., <u>in rem</u> ; ARTIC	:	
REEFER CORP., INC., and ATLANSHIP S.A.	:	
<u>in personam</u> ,	:	
	:	
Defendants.	:	
	:	
-----X		

KATHERINE B. FORREST, District Judge:

The NEW YORK (referred to "the Dredge") is the biggest and most powerful backhoe excavator dredge authorized to carry out dredging in U.S. waters. On January 24, 2008, it was stationary and carrying out dredging operations in Newark Bay. At just before 2:00 p.m. that day, the M/T ORANGE SUN, an ocean-going cargo vessel, collided with the Dredge, causing extensive damage. Defendants M/T ORANGE SUN, Arctic Reefer Corp.--that vessel's owner, and Atlanship, S.A., the operator and manager of the M/T ORANGE SUN, conceded liability and paid between \$5 and \$6 million to settle the costs of salvage and repair.

Plaintiffs Great Lakes Business Trust ("Great Lakes")--the Dredge's owner--and Great Lakes Dredge & Dock Co., LLC ("GLDD"), which chartered the Dredge, brought this action for

consequential damages: loss of use or lost profits damages, overhead, liquidated damages and prejudgment interest. Each category of damages relates to plaintiffs' claim that during the period in which the Dredge was under repair, plaintiffs were unable to put the Dredge to productive use. The most significant damages claim is that for loss of use. Altogether, however, plaintiffs have asserted a damage claim in excess of \$13 million.

This Court held a bench trial on January 23-25, 2012.¹ The following individuals testified on plaintiffs' behalf: Bruce Biemeck, President and Chief Financial Officer of Great Lakes, Christopher Gunsten, Project Manager for Great Lakes, Brian Goetchius, the Northeast Region Port Engineer and Dredge New York Technical Manager for Great Lakes, John Vickers, who testified as both an expert on vessel repairs and as a fact witness who had seen certain of the repairs in progress, and Samuel Rosenfarb, a damages expert who testified as to an appropriate

¹ The parties submitted direct testimony by declaration, affidavit, and signed expert report. Those declarations and affidavits were each marked as Court exhibits during the trial and are cited herein as "[Name of the witness] Aff." Certain percipient witnesses submitted supplemental affidavits which are cited herein as "[Name of witness] Supp. Aff." The expert reports submitted as direct testimony are cited with the same convention, "[Name of the expert] Aff." Each of the witnesses was presented for live cross examination.

Exhibits entered into evidence are cited herein as "Ex." However, the term "Ex." immediately after a citation to an expert affidavit/report references the exhibits to that report, not one of the trial exhibits.

Citations to the transcript of the trial are referred to herein as "Tr." with the name of the witness testifying during that time contained in parenthesis.

measure of lost profits. This Court found each of plaintiffs' fact witnesses credible. In addition, this Court found that the expert testimony of Messrs. Vickers and Goldfarb was helpful to the Court, and based in sound analytics and experience; the Court therefore credits their testimony.

The defendants did not present any percipient witnesses. They presented testimony from three experts: Rik Van Hemmen, an expert on vessel repair, Robbert Ten Veen, an expert on vessel repair, and Louis Magnan, a damages expert who testified that no lost profits ought to be awarded. Each of Messrs. Van Hemmen and Ten Veen work with individuals who were in the presence of the Dredge for periods of time in which repairs to it were ongoing. (Those individuals included Wayne Thomas, who worked for defendants' insurer and wrote a number of reports about the Dredge's repairs, see Exs. 36-42, none of which contains a single complaint regarding the repair process.) Defendants did not call those individuals.

This Court found defendants' experts ultimately unhelpful to the determinations that it needed to make in this matter. Neither of the experts on the repairs to the Dredge offered specific, detailed opinions based in more than ipse dixit, that particular repair items took an unreasonable length of time.²

² Mr. Ten Veen did obtain a third-party time estimate of a repair period for one aspect of the Dredge (the crane), but that estimate was not based upon

While both testified that the overall period was unreasonable, and Mr. Ten Veen testified that the repairs associated with the crane were unreasonable, those opinions were without sufficient basis in the actual facts relating to the repair situation of the Dredge. Defendants' damages expert opined that various assumptions contained in Mr. Rosenfarb's analysis were flawed. However, after careful consideration of the reports of both damages experts and their testimony at trial, this Court credits the testimony of Mr. Rosenfarb and not that of Mr. Magnan.

Neither party made any *Daubert* motions to preclude the testimony of any proposed expert.

This Opinion constitutes the Court's findings of fact and conclusions of law. As set forth below, this Court finds that the plaintiffs are entitled to an award of demurrage damages in the amount of \$11,736,643 and prejudgment interest calculated at the rate of 3.66 percent.

This Court declines to award liquidated damages or overhead. The testimony at trial was sufficiently unclear as to the reasons why the Army Corps of Engineers might have withheld liquidated damages and whether it would in fact continue to withhold such monies. In addition, the Court did not find that

assumptions of analogous facts, and this Court therefore does not find it reliable. (See Tr. 423:18-424:8 (Ten Veen).)

plaintiffs proved by a preponderance of the evidence the amount of overhead recoverable.

OVERVIEW OF THE DISPUTE

Few facts are in dispute. The parties agree on when and how the allision (i.e., when a moving, waterborne vessel collides with another, stationary vessel) occurred and that, as a result, the Dredge required significant repairs.

The outcome of this matter, and the primary focus at trial, turns on two sets of related legal and factual issues:

(1) whether plaintiffs proved their claimed lost profits with the requisite level of "reasonable certainty;" and (2) for what period of time should lost profits be calculated? Put another way, for what period of time should defendants be charged for the plaintiffs' inability to put the Dredge to productive use during repairs?³ Issues relating to liquidated damages, overhead and prejudgment interest were tangential to these two primary issues.

FINDINGS OF FACT

A. The Parties

1. Plaintiff GREAT LAKES BUSINSS TRUST No. 1998-Dtd 10/10/98 (defined above as "Great Lakes") is a trust organized

³ The repair period during which the Dredge was out of use is sometimes referred to as the "period of detention."

under Delaware law. (Joint Pretrial Order (Dkt. No. 40), Stipulated Facts (cited herein as "SF") ¶ 1.)

2. The Dredge NEW YORK (defined above as the "Dredge") is a backhoe-type dredge based in New York Harbor. Great Lakes owns the Dredge New York and chartered it to GLDD. (Biemeck Aff. ¶¶ 14, 16-17.) Pursuant to the terms of the bareboat charter, Great Lakes has the use of the Dredge through April 1, 2020. The term of the charter is fixed and was not extended as a result of the allision and the subsequent repair period. (Biemeck Aff. ¶ 51.) As a result, there are a fixed number of days for which Great Lakes can use the Dredge to earn income. (*Id.*)

3. Plaintiff GLDD is a dredging company that performs dredging work around the world--both in North America and elsewhere. GLDD operates a fleet of dredges and other support vessels. (Biemeck Aff. ¶¶ 9, 11-12.)

4. Great Lakes' most significant client in and around the New York Harbor is the U.S. Army Corps of Engineers (the "Army Corps"). (Biemeck Aff. ¶ 24, 34-36, 38.)

5. Defendant ARCTIC REEFER CORP., INC. ("Arctic Reefer") is a corporation organized under the laws of Liberia. (SF ¶ 5.) Defendant Arctic Reefer owns the M/T Orange Sun, an ocean-going cargo tanker. (SF ¶¶ 4-5.) Defendant ATLANSHIP, S.A. is a Swiss corporation that operates and manages the M/T ORANGE SUN. (SF ¶ 6.)

B. The Dredge NEW YORK

6. No one has disputed that the Dredge has characteristics that set it apart from any other dredge currently operating in U.S. waters. It is a mechanical dredge that uses a large, sophisticated excavator with a suspended bucket to excavate the sea bottom. The Dredge is 192.1 feet long, 57.4 feet in breadth, and is capable of operating with bucket sizes from 13 to 24 cubic yards. It is unique in its size and power. (Biemeck Aff. ¶ 20; see also SF ¶¶ 23-24; Tr. 65:5-9 (Biemeck).)

7. The Dredge was built in the United States in 1999 to provide efficient excavation capabilities for U.S. dredging projects, although it is capable of overseas operations as well. The Dredge has operated primarily in the Port of New York and New Jersey, but has also operated in other ports. (Biemeck Aff. ¶ 21; see also Goetchius Aff. ¶¶ 6-14.)

8. Although there are other excavator dredges owned by U.S. competitors, their size, efficiency and capacity are not comparable to the Dredge. And, while there are similarly sized dredges elsewhere in the world, because they were not built in the U.S. and not owned by U.S. citizens, they are not permitted to engage in dredging in U.S. waters because of the U.S. Dredging Act (46 U.S.C. § 55109). (Biemeck Aff. ¶ 22.)

9. The Dredge is non-self-propelled, but can hold itself in place with three large vertical steel supports (called "spuds") that can be set down into the bottom of a waterway or lifted up, one on each side and one at the stern. The spud at the stern is called a "traveling spud," because it can be moved to reposition the Dredge. The spuds allow the Dredge to be held in position while working; the traveling spud allows the Dredge to make incremental adjustments to its position. The spuds are approximately 110 feet long, and weigh approximately 100 tons. (Goetchius Aff. ¶ 12.)

10. The Dredge includes a "Liebherr P996" excavator, manufactured by Liebherr Group, a Swiss company, which is operated from a multi-story "house." The extension arm of the excavator is multi-sectioned, with the large first section referred to as the "boom," the second section as the "stick," and the scoop referred to as the "bucket." The Dredge can use different bucket sizes, including various 13-cubic yard and 17-cubic yard buckets, as well as the 24-cubic yard bucket. For certain operations, including operations using the 24-cubic yard bucket, the excavator uses a "Boom Assist System," which includes an A-frame structure with a heavy duty winch that controls a lifting cable that can be attached to the excavator boom to provide additional lifting force. (Goetchius Aff. ¶ 6.)

11. The hydraulic power for digging by the excavator is provided by two large Cummins engines and a complement of hydraulic pumps located in the excavator house. (Goetchius Aff. ¶ 10.)

12. In addition to its capabilities as an excavator capable of digging hardened materials and broken rock, the Dredge also has a computerized Dredge Position Monitoring System ("DPMS"). That computer system incorporates various sensors on the excavator boom and stick, along with GPS and other inputs, providing the operator an ability to carefully position and monitor dredging operations for a much higher level of precision and productivity than available with other vessels. Those capabilities make the Dredge a very useful and unique dredging vessel. (Biemeck Aff. ¶ 23; see also Goetchius Aff. ¶ 13.)

13. The Dredge has various other mechanical, electronic, electrical, and hydraulic control systems and circuits, including winches used to raise and lower the port and starboard spuds, hydraulic power unit (including one called the "HYTOP" used for regulating hydraulic power to the excavator) and associated electrical control cabinets, a fire suppression system, bilge pumps, fire pumps, oil pumps, a marine sanitation system, a potable water system, a hydraulic power unit for the general ship service crane, and a pull-back winch power unit (used to pull the A-frame into an upright position). The Dredge

also carries various tools, supplies, and stores. (Goetchius Aff. ¶ 11.)

14. The Dredge is the only excavator dredge in Great Lakes' fleet. It was specifically built to provide a highly efficient means of dredging hard materials and broken rock from the subsurface. It is the only vessel in Great Lakes' fleet that can efficiently and economically dredge the hardest rock materials, a necessary capability for certain contracts (particularly in the New York/New Jersey area). (Biemeck Aff. ¶ 23.)

15. Great Lakes also has "clamshell" dredges in its fleet. Clamshell dredges are neither designed for nor capable of dredging the hardest materials found in the New York and New Jersey waterways. (Biemeck Aff. ¶ 23.)

C. The New York Harbor Deepening Project

16. The New York Harbor Deepening Project is a comprehensive project undertaken by the U.S. Army Corps of Engineers which involves a phased program to deepen the channels within the Port of New York and New Jersey to 37' then to 42', then to 47', and eventually to 52' to accommodate larger vessels. (Biemeck Aff. ¶ 26; SF ¶ 25.)

17. The project entails a total of eighteen dredging contracts designed and contracted by the Army Corps of Engineers. Current projections are that the project will

continue through at least 2015 and will require spending in excess of \$2 billion. (Biemeck Aff. ¶ 27.)

D. The Dredge's Utilization Rate

18. The Dredge was built specifically to work on projects such as the New York Harbor Deepening Project, which requires dredging and removal of the hardest rock materials. Such projects are not limited to the New York/New Jersey area. From time to time, the Dredge has been subcontracted to third parties within and outside the New York/New Jersey area. (Biemeck Aff. ¶ 28.)

19. When in use, the Dredge and the other vessels in Great Lakes' fleet do not work an eight-hour day--they work continuously. (Tr. 81:24-25-82:1 (Biemeck).) The Dredge is designed to work 24 hours a day and has a crew 24 hours a day. (Tr. 87:24-25, 88:1-7 (Biemeck).)

20. During the period from 1999-2006 (*i.e.*, after the Dredge's completion in 1999 and before the expansion of the New York Harbor Deepening Project in 2007), Great Lakes employed the Dredge on various contracts in New York, San Juan, Wilmington, and Boston. In addition, Great Lakes also subcontracted the Dredge to other dredging companies. (See Exs. 8-10.) In 2004, the Dredge was chartered to Donjon (*see* Ex. 8), and in 2006 it was chartered twice to Bean Stuyvesant, LLC (*see* Exs. 9-10; Biemeck Aff. ¶¶ 29-30).

21. At trial, Mr. Biemeck testified credibly that the Dredge can and does sometimes actually work on more than one project in a day. (Tr. 51:5-9 (Biemeck).)

22. Great Lakes performed a 10-year study that encompassed the period from 1999 to 2006 that determined that the Dredge had a 51 percent utilization rate over that period of time. Messrs. Biemeck and Rosenfarb confirmed that during the period from 1999 through 2006, Great Lakes achieved a utilization rate of (give or take) approximately 51 percent for the Dredge. (Ex. 14; see also Tr. 60:14-61:1 (Biemeck), 137:6-138:7, 188:24-189:2 (Rosenfarb).)⁴

23. Mr. Biemeck also testified credibly that in late-2007, the utilization of the Dredge increased significantly. The most immediate reason for the increase was due to a reduction in competition: in April 2007, the Dredge TAURACAVOR, which had similar characteristics and capabilities to the Dredge, was lost at sea. Mr. Biemeck testified that this increased the specific demand for the Dredge. (Biemeck Supp. Aff. ¶ 13.) In addition, in 2007, the New York Harbor Deepening Project began in earnest--creating additional opportunities for the Dredge. Notably, the New York Harbor Deepening Project is still ongoing. (Biemeck Aff. ¶¶ 31.)

⁴ Exhibit 14 reflects the Dredge's total revenue hours in each year from 1999 to 2006 which are averaged to 51.59 percent. The yearly utilization rates are derived by taking the total revenue hours divided by the available revenue hours in each year which is 8,760 hours (*i.e.*, 24 hours x 365 days) or 8,784 hours in leap years.

24. Mr. Biemeck testified that Great Lakes calculated that (i) from November 1, 2007 (when the Newark Bay contract, one of the contracts under the project, began) until the time of the allision on January 24, 2008 (a total of 85 days), and (ii) from September 1, 2008 (when the Dredge came back online) until March 31, 2010 (a total of 577 days), the Dredge's utilization rate rose to 92.19 percent. The Court found Mr. Biemeck's testimony to be credible and Great Lakes' calculations to be reasonable and based in the evidentiary record. (Biemeck Aff. ¶¶ 32, 73.) Mr. Rosenfarb tested and confirmed those calculations. (Rosenfarb Aff. ¶ 59; Tr. 188:20-23 (Rosenfarb).)

25. There were times, however, that the Dredge was not utilized. That accounts for the delta between 92.19 percent and a 100 percent utilization rate: for the first 24 days of January 2008, the Dredge was under repair and unable to be put to productive use for all or part of the day. (Ex. A-4; see also Tr. 270:11-14 (Goetchius).) As a general matter, in several areas within the scope of the Newark Bay and Port Jersey Contracts, environmental regulations prevented Great Lakes from dredging silt materials for the period from February 1 through May 31, and non-silt materials for the period from April 1 through May 31. (Exs. A-5, A-10, A-11, B-4, B-5 & C-5.)

26. The Dredge also has to have periodic maintenance--some of this can be done without removing the Dredge from service;

other types of maintenance require the Dredge to be taken out of service. (Tr. 273:4-7 (Goetchius).)

27. To the extent that particular jobs had environmental restrictions at a point in time, Great Lakes would have focused on jobs that did not have such restrictions. (Tr. 80:21-23 (Biemeck).)

28. When the Dredge returned to service on August 5, 2008, Great Lakes deployed it on the contract that had the earliest completion date relating to Newark. (SF ¶ 33; Ex. D-11; Gunsten Aff. ¶ 4.)

29. In addition to a daily utilization rate there is also an efficiency rate. Pre-allision, Great Lakes calculated that the Dredge operated at an efficiency rate of 65 percent; post-allision, that efficiency rate has declined to 45 percent. (Tr. 68:5-7 (Biemeck).) Utilization rate measures revenue earning; efficiency rate measures how efficient the Dredge is when it is earning revenue. (Tr. 73:18-21 (Biemeck).)

30. Mr. Biemeck testified at trial that calculations of the efficiency of the Dredge include a certain percentage for down time for repairs and maintenance. (Tr. 66:17-18 (Biemeck).) Some minor repairs (such as changing the oil and the like) can be done while the Dredge is operating. (Tr. 66:12-13 (Biemeck).)

31. Mr. Goetchius testified that there was a period of one month on 2008 and for over a month in 2009 in which the Dredge was dry docked for repairs that had nothing to do with the allision. (Tr. 351:1, 352:6-12 (Goetchius).) In 2011 the Dredge also had a boom cylinder failure that had nothing to do with the allision. (Tr. 353:4-6 (Goetchius).)

E. The Dredge's Employment History and Future opportunities

32. Great Lakes has been awarded a number of the contracts under the New York Harbor Deepening Project. (Biemeck Aff. ¶¶ 34-38.)

33. Specifically, on June 21, 2007, the Army Corps of Engineers awarded Great Lakes Contract W912DS-07-C-0015 to deepen the Newark Bay Channel. (See Exs. 2-3; SF ¶ 27.) The Corps estimated that once started, the work on this contract would take 310 days to complete. (Biemeck Aff. ¶ 35.)

34. On October 19, 2007, the Army Corps awarded Great Lakes Contract W912DS-08-C-002 to deepen the Port Jersey Channel. (See Exs. 4-5; SF ¶ 28.) The Corps intended this contract to begin before the end of 2007 and estimated that once started, it would take two years to complete. (Biemeck Aff. ¶ 36.)

35. At the time of the allision, the Dredge was working on these two contracts. (Biemeck Aff. ¶ 37; see *generally* Gunsten Aff.)

36. Mr. Rosenfarb performed a bidding analysis that was neither addressed nor contradicted by defendants. This analysis determined that Great Lakes obtained a large share of deep port projects, winning 95 percent of such bids in 2007 alone. (Rosenfarb Aff. ¶ 48.)

37. On June 27, 2008, while the Dredge was being repaired after the allision, the Army Corps of Engineers awarded Great Lakes Contract W912DS-08-C-0016 to deepen the Kill van Kull Channel. (See Exs. 6-7; SF ¶ 29.) The Corps estimated the contract would entail 950 days of dredging. (Biemeck Aff. ¶ 38.)

38. During the period of time that the Dredge was under repair, Great Lakes continued to perform works on these contracts with its clamshell dredges. The clamshells did not, however, do the work that was anticipated to be done by the Dredge New York because the clamshells could not handle the harder material; the clamshells dredged the softer, maintenance type material. (Tr. 78:10-16 (Biemeck).) The cost of drilling, blasting and excavating with a clamshell dredge is something on the order of 40 percent higher than using the Dredge New York. (Tr. 79:23-25 (Biemeck).) The clamshells could not "pick up the slack" for the work that the Dredge was unable to do while it was out for repairs since they were not capable of dredging the material that the Dredge New York is capable of dredging. (Tr. 82:9-11 (Biemeck).)

39. After the repairs were completed, the Dredge continued work on the Newark Bay and Port Jersey contracts and was also used on the Kill van Kull contract. All three of those contracts were fulfilled, and Great Lakes has continued to obtain contracts for the New York Harbor Deepening Project. (Biemeck Aff. ¶ 39.)

40. The Dredge removed blasted rock in Area D of the Newark Bay Contract during the period from August 5 to August 15, 2008. (SF ¶ 34; Ex. D-11.)

41. On August 7, 2008 and again on November 4, 2008, Great Lakes announced that "[w]ith the dredge now operational, the Company currently believes it will meet its obligations under both its Newark Bay and Port Jersey contracts with the Army Corps of Engineers." (Exs. D-1 & D-2.)

42. The Dredge continued to work on the Newark Bay Contract for the period from August 15 to January 11, 2009, removing blasted rock for the first five days, and then removing rock as well as clay and glacial till. (SF ¶¶ 34, 39.)

43. Great Lakes substantially completed its work on the Newark Bay Contract in January 2011. (SF ¶ 39.)

44. Following completion of the Newark Bay Contract, Great Lakes used the Dredge on the Port Jersey Contract. (SF ¶ 35; Ex. D-11.) Environmental restrictions prevent dredging in the majority of the Port Jersey area from February 1 to May 31 each year so as to protect winter flounder. (Gunsten Aff. ¶ 20.)

Great Lakes substantially completed its work on the Port Jersey Contract in February 2010. (SF ¶ 38.)

45. While Great Lakes completed the work on these contracts after the Dredge was back in service, all three contracts were completed later than they otherwise would have been because of the Dredge being laid up. (Tr. 95:19-96:16 (Biemeck).)

46. Great Lakes began work on the Kill Van Kull Contract in September 2008, using other dredges and vessels to perform the work. (SF ¶ 36.) In April 2009, Great Lakes began using the Dredge to assist in performing the work on that contract. (SF ¶ 37; Ex. D-11.) Great Lakes substantially completed its work on the Kill Van Kull Contract in March 2011. (SF ¶ 40.)

47. Great Lakes is also currently using the Dredge on a subcontract to Northeast Dredging Equipment Company LLC for work in connection with its contract to deepen Newark Bay and Arthur Kill (its contract S-NB-2/ S-AK-1). (Biemeck Aff. ¶ 39; Tr. 42:18-20 (Biemeck).)

48. The Dredge continues to be actively employed in the New York/New Jersey area. (Biemeck Aff. ¶ 39.)

49. After completion of the New York Deepening Project, Great Lakes intends to employ the Dredge in a deepening project in Mayport, Florida. (Biemeck Aff. ¶ 39; Tr. 106:14-15 (Biemeck).)

The Mayport job will consist of approximately four months of work. (Tr. 106:24 (Biemeck).)

50. In addition, once the New York Harbor Project is completed, the Dredge's unique capabilities place Great Lakes in a very competitive position for employment in other anticipated harbor deepening projects throughout the country. Such projects are reasonably anticipated because, in addition to the prior record of demand for the Dredge, Great Lakes has already experienced strong new demand arising from the harbor deepening projects.⁵ (Biemeck Aff. ¶ 40.)

51. Mr. Biemeck testified that since the average controlling depth of the largest U.S. ports is 5-10 feet shallower than the controlling depth of major international ports worldwide, he expects that U.S. ports will find themselves having to soon undertake deepening projects to remain competitive in the international market. In fact, the ports of Los Angeles and Long Beach are currently resuming expansion efforts to remain competitive with the deepened East Coast ports. (Biemeck Aff. ¶ 41.)

52. Furthermore, recent developments in the Liquid Natural Gas ("LNG") market have created demand for capital dredging

⁵ The causal reason for the harbor deepening projects relates to the shipping industry's move towards larger cargo vessels at the same time as the government of Panama is expanding the Canal. The completion of the Panama Canal project in 2014 will allow deeper draft vessels to transit the Canal, and U.S. East Coast, Gulf Coast and West Coast ports will need deeper channels to accommodate those vessels. (Biemeck Aff. ¶ 40.)

projects for which there are opportunities for the Dredge.

(Biemeck Aff. ¶ 42.)

53. The Army Corps is seeking to achieve a depth of 52 feet in the New York Harbor; but once that is achieved, there will still be projects up and down the East Coast that require the hard material capabilities of the Dredge. (Tr. 84:1-13 (Biemeck).) Great Lakes anticipates bidding on those projects. (Tr. 84:18-19 (Biemeck).)

54. Certain projects require the Dredge to be repositioned; but Great Lakes has paid for mobilization and demobilization. (Tr. 90:10 (Biemeck).)

55. Based upon the foregoing, the Court finds that the evidence reflects that there was an active market for the Dredge (both in New York and in other U.S. locations) at the time of the allision, immediately thereafter, presently and into the foreseeable future.

56. As such, and given the projected harbor expansion projects throughout the U.S., the Dredge's competitive advantage based upon its unique capabilities, and the Dredge's utilization history, it is reasonably certain that the Dredge will be employed throughout the full term of the bareboat charter under which Great Lakes has the exclusive use of the Dredge, and could have remained so employed during a period equal to its average utilization rate

of 92 percent but for the allision. (See, e.g., Biemeck Aff. ¶ 43.)

57. From its review of the evidence, the Court finds that had the allision not occurred, the contracts on which the Dredge was working would have been completed earlier and Great Lakes would have been able to move on to additional work with the Dredge. This would have kept the Dredge operational and generating revenue during virtually all of the 194 day repair period and more productively employed during the 24 day start-up period.

F. Repairs to the Dredge

58. When the allision occurred, the bow of the M/T ORANGE SUN struck the Dredge and punctured a hole in its hull below the waterline. Several areas of the Dredge were flooded because, while there were three manual watertight doors below the main deck that could have been closed and prevented flooding into those areas, the doors were in the open position when the Dredge was struck. (SF ¶¶ 9-10; Exs. 29, 36; Tr. 289:9-11 (Goetchius).)

59. The Dredge suffered a large fracture in the port side of its hull and significant flooding, and was nearly submerged. The spuds were damaged, but managed to keep the Dredge afloat until the Dredge could be stabilized by salvage efforts. (Biemeck Aff. ¶ 46; see also Tr. 287:22-25 (Goetchius).)

60. Brian Goetchius--Great Lakes' New York Area port engineer--oversaw the bulk of the repairs to the Dredge. (Tr. 251:3-4 (Goetchius); *see also, e.g.*, 290:10-11, 305:21-22 (Goetchius).) Mr. Goetchius had been working with the Dredge in 1999 and worked on repairs relating to the Dredge for a number of years prior to the allision. (Tr. 251:13-22 (Goetchius).)

61. Mr. Goetchius testified credibly that whenever a vessel is in the yard for repairs there was constant pressure to get the repairs done quickly so that the vessel could be returned to productive use. (Tr. 258:23-25 (Goetchius).)

62. It took about a week to conduct the salvage operations for the Dredge. (Tr. 290:2-6 (Goetchius).) Salvage efforts were performed, and after temporary patches were applied to the Dredge, it was towed to the former Brooklyn Navy Yard Graving Dock (now known as GMD Shipyard Corp. or "the shipyard") for permanent repairs. (Biemeck Aff. ¶46; *see also* Goetchius Aff. ¶¶ 17-52; Tr. 290:7-9 (Goetchius); SF ¶¶ 9-15.)

63. Great Lakes' initial assessment determined that repairs would be needed to the hull, submerged electrical components, the excavator, numerous auxiliary equipment, and areas. (Tr. 290:22-24 (Goetchius); Ex. 30.) It soon became apparent that the slew bearing would have to be replaced. (Tr. 294:16-20 (Goetchius).) In addition, various areas had to be repainted. (Tr. 297:16-19 (Goetchius).)

64. Neither party disputes that in addition to the hull repairs, the principal repairs involved: replacement of the swing bearing for the Liebherr backhoe crane; replacement of the mooring spuds; replacement of the No. 2 engine; replacement of Dredge Positioning Monitoring System; and, various electrical and wiring jobs for the Dredge's control systems. (SF ¶ 14; Exs. 30, E-7.)

65. Mr. Goetchius was told by Steve Becker at Great Lakes that while the Dredge was out of service it was losing revenue and needed to be returned to service as soon as possible. (Tr. 293:3-9 (Goetchius).) Mr. Goetchius was under instructions to return the Dredge to service as soon as possible. (*Id.*)

66. Within two weeks of the allision, Mr. Goetchius and others at Great Lakes had discussions to identify the "critical path" for the Dredge repairs. (Tr. 303:20-25 (Goetchius).) "Critical path" refers to "path to completion and what was going to take the most time to get the Dredge back into service." (See, e.g., Tr. 305:7-10 (statement by counsel).)

67. At this time, the digging computer was considered to be the critical path since it was thought to have the longest lead time needed from time of ordering to receipt. Numerous repairs had to occur before the computer could be installed. (Tr. 304:4-21 (Goetchius).) Over time, Mr. Goetchius' view as to what the critical path was changed to "pulling numerous aspects

of the repair together at the same time with the electrical aspect and operation of the high top system being one of the longer lead times." (Tr. 306:17-25 (Goetchius).) The high top system related to the spuds (which are the "leg like" steel beams that hold the Dredge in place). (Tr. 307:1-2 (Goetchius).) Mr. Goetchius testified that doing repairs after a vessel has been submerged involve numerous considerations that are not present when a vessel is having scheduled repairs or maintenance. (See, e.g., Tr. 310:17-18 (Goetchius).)

68. Mr. Goetchius had prior experience overseeing repairs for a vessel that had been submerged. (Tr. 313:8-11 (Goetchius).)

69. The Dredge was out into dry dock on February 8, 2008, at GMD. It took several weeks for the GMD Shipyard to perform the initial repairs on the hull. The hull repairs were completed on March 1, 2008. (SF ¶ 30; Exs. 30 & E-7.) No witness testified that these repairs to the hull were unnecessary. No witness offered a different length of time within which the hull repairs specifically should have been completed.

70. The Dredge remained in the dry dock until March 24, 2008 while the exterior hull of the Dredge in the way of the repairs was painted and the interior spaces of the Dredge were painted. (Exs. 30, E-7.) No witness testified that this

painting was unnecessary or offered a specific length of time within which the painting should have been completed.

71. The Dredge came out of the dry dock on March 24, 2008, and was towed to the Plaintiff Great Lakes' Staten Island yard facility on March 25, 2008. (Ex. 30.) Great Lakes had two choices for the main repair site: its own shipyard--i.e., the Great Lakes Shipyard in Staten Island--and the GMD Shipyard. There was credible testimony from Mr. Goetchius that the Great Lakes Shipyard presented certain advantages that were absent from the GMD Shipyard: *inter alia*, Great Lakes' own shipyard was staffed with personnel who were familiar with the Dredge and whose time and tasks were under the control of Great Lakes. (See, e.g., Tr. 322:12-323:23 (Goetchius).) A disadvantage of using the Great Lakes Shipyard was the absence of a crane that was tall enough to perform certain repairs. This required a number of trips between the Great Lakes Shipyard and the GMD Shipyard. However, repairs were able to be performed while the Dredge was being physically towed from one facility to another. (Tr. 323:25, 324:1-3 (Goetchius).) According to Mr. Goetchius, this towing did not add time to the number of days necessary for completion of all repairs. (*Id.*)

72. Immediately after the allision, it was unclear how long the repairs would take. Great Lakes made various internal estimates. A repair schedule prepared by the Plaintiffs on March

18, 2008, estimated that repairs would be completed by June 1, 2008. (Exs. 30, E-7.)

73. Additional repairs to the Dredge were made by Great Lakes, primarily using its own employees and facilities as well as several subcontractors. (Exs. 30, E-7.)

74. While the Dredge was having the repairs necessary to address the damage from the allision, certain other repair work was performed that was unrelated to the allision. (Ex. 29.)

75. Repairs unrelated to the allision included: repairing a preexisting crack in the main frame for the Liebherr crane, an upgrade of light fixtures from mercury to fluorescent, upgrading the decking from wood to galvanized steel, welding work to the boom and the installation of a satellite workshop on the deck. (Ex. 29 (Vickers Aff. ¶¶ 8-15); Tr. 332:18-19, 335:4-6 (Goetchius).) Mr. Goetchius testified credibly that repair of the pre-existing cracks did not add to the repair time. (Tr. 336:7-23 (Goetchius).)

76. Mr. Goetchius further testified credibly that as the repairs proceeded it became clear that they would take longer than originally estimated. This was due to numerous items including an engine failing during testing, weather delays and the extent of the cracks was larger than expected. (Tr. 337:17-22 (Goetchius).)

77. Mr. Goetchius also testified credibly that Great Lakes used numerous outside contractors and extra workers to assist with the repairs. (Tr. 383:22-24 (Goetchius).) The repairs were conducted seven-days a week. (Tr. 386:14-22 (Goetchius).)

78. When the repairs had been completed, it was necessary to test various pieces of equipment to insure that they were both safe and in working order. This testing was commenced on August 5, 2008, 194 days after the allision. (SF ¶ 19; Ex. 30; Tr. 359:14-21 (Goetchius).)

79. At trial, Great Lakes presented expert testimony from Mr. John Vickers, a marine surveyor with over forty years marine experience, the last twenty-eight of which have been spent as a marine surveyor in the New York area. Mr. Vickers was the attending surveyor on behalf of Great Lakes' hull underwriters and had first-hand knowledge of the facts and circumstances of the repairs and repair process. Mr. Vickers testified that the repairs were done very efficiently. (Ex. 29; Tr. 412:2 (Vickers).)

80. Defendants' expert, Mr. Ten Veen, testified that Great Lakes is an experienced international dredging contractor that is capable of arranging, planning, and supervising extensive overhauls. (Tr. 417:20-21, 418:12-15 (Ten Veen).)

81. While Mr. Ten Veen believed that, for instance, the time taken to repair the swing bearing could have been greatly reduced, he based this largely on an estimate he received from a third

party. The Third party was not asked the length of time it would take to conduct the repair in the context of damage resulting from allusion--and it is therefore unclear whether the proffered length of time is analogous or not to the actual circumstances of the Dredge. (See e.g., Tr. 424:1-8 (Ten Veen).)

82. Martin Van Hemmen also testified as an expert on dredge repairs for defendants. However, Mr. Van Hemmen only visited the repair site once during the repair period. (Tr. 439:19-22 (Van Hemmen).) While Mr. Van Hemmen opined that the time that Great Lakes took to perform repairs on the excavator was unreasonable, that was not based on a study of any type but was simply *ipse dixit*. (See e.g., Tr. 439:18-20 (Van Hemmen).) The same was true with regard to his opinion as to the period of time that it took to repair the computer system. (Tr. 439:21-23 (Van Hemmen).) Mr. Van Hemmen also testified that repair times are incredibly flexible. (Tr. 447:18-19 (Van Hemmen).) He agreed that there would be a range of reasonable times that a given repair could take (though he opined that the repairs here took too long). (Tr. 449:21-24 (Van Hemmen).) Mr. Van Hemmen had himself never worked on repairs for a dredge with similar characteristics to that of the Dredge New York. (See e.g., 460:17-19, 463:6-15 (Van Hemmen).)

83. This Court finds that based upon the credible testimony of Messrs. Biemeck, Gunsten, Goetchius and Vickers, as set forth above, Great Lakes acted reasonably in its repair efforts with

respect to the Dredge. Although the repair period took longer than originally anticipated, the Court finds that based upon credible testimony, and the only testimony relating to the repairs provided by witnesses with personal knowledge, the delays were reasonably incurred and not due to any lack of diligence. (Goetchius Aff. ¶¶ 17-52; Exs. 29, 32, 33, 36-44.)

84. When the Dredge returned to service on August 5, 2008, Great Lakes tested the Dredge to insure that it was in working order. To do this it had calibrate the various systems, including the Boom Assist System. This meant that the Dredge was only gradually brought back to full operational status. As part of this test and evaluation period, Great Lakes operated the Dredge with the smaller 13 cubic yard dredging bucket, rather than the 24 cubic yard dredging bucket. On or about August 29, 2008 (about 24.3 days after the Dredge returned to service), the Dredge was restored to dredging with the full 24 cubic yard dredging bucket. (Biemeck Aff. ¶ 47; Goetchius Aff. ¶¶ 33-35.)

85. The Court found Mr. Goetchius' testimony credible that the startup period of 24.3 days was necessary and reasonably incurred to restore a complex system to full operation and was not unreasonably delayed or extended through any lack of diligence. (See Goetchius Aff. ¶¶ 34-35; Tr. 359:14-363:25 (Goetchius).)

86. Based upon the above, there was credible testimony that the Dredge was out of service for 194 days and was then operated at

less than full capacity for another 24 days. Accordingly, the Court finds that the Dredge was not able to be put to full productive use for a total of 218.3 days.

G. The Costs of the Repair for the Dredge Have Been Settled

87. Pursuant to a series of agreements that were made while this litigation has been pending, plaintiffs' principal claims for salvage expenses, repairs made to the Dredge, out-of-pocket expenses incurred by the plaintiffs, the plaintiffs' adjuster's expenses, in-house labor for electrical work, replacement of the Dredge's positioning system, crew labor, the marine superintendent's salary and interest on these items have been settled. (SF ¶¶ iv, 17; Exs. 21-24.)

88. Altogether, defendants have paid \$6,302,714.50 in repair costs for the Dredge. (Exs. 21-24.)

H. Calculation of Loss of Use Damages

89. Great Lakes put forth a damage calculation performed by their expert, Samuel Rosenfarb. Mr. Rosenfarb is a forensic accountant with more than forty years experience. He is a Certified Public Accountant (CPA), Accredited in Business Valuation (ABV), Certified Fraud Examiner (CFE), Certified Valuation Analysis (CVA), and Certified Business Appraiser (CBA). (Rosenfarb Aff. App. E.)

90. Mr. Rosenfarb testified credibly and knowledgeably at the trial. He testified that he did a "lost profits" or

"contribution analysis" calculation. That allowed him to calculate the amount required to place Great Lakes in the same position it would have been in had the allision not occurred. (Tr. 137:6-10 (Rosenfarb); see also Biemeck Aff. ¶¶ 54-56.)

91. To perform his analysis, Mr. Rosenfarb gathered materials and then met with Great Lakes personnel in Oak Brooke, Illinois to review the supporting documents and the original books containing details to confirm that the information that he was being provided was fair, reasonable and supported by the audited results. (Tr. 128:17-25, 129:1-13 (Rosenfarb).) He reviewed and had access to everything that he believed was necessary to perform his analysis. (*Id.*)

92. Mr. Rosenfarb's analysis of the historical utilization of the Dredge indicated that it had earned revenues in every year--i.e., that there was never a period during which the Dredge did not earn revenues. (Tr. 137:13-18 (Rosenfarb).) He also evaluated the market conditions for dredging services and determined that there was both a national and international market. (Tr. 138:1-16 (Rosenfarb).)

93. Mr. Rosenfarb testified that based on his review of the materials, but for the allision, the contracts on which the Dredge was working would have been completed sooner and the Dredge would have been able to have moved on to other work that much sooner. (Tr. 139:1-4 (Rosenfarb).)

94. Mr. Rosenfarb testified that in order to determine with reasonable certainty whether the Dredge would have earned revenue if it had not been under repair for 194 days, he did not need to reference a specific lost customer or specific lost contract because of the historic utilization of the Dredge. Therefore, there was a reasonable certainty that the Dredge would have earned revenues during the 194 days. (Tr. 140:12-25 (Rosenfarb).)

95. Mr. Rosenfarb opined that there was strong national and international demand for the Dredge and that this would have resulted in work. (Rosenfarb Tr. 142:9-11.) "There was great likelihood, great certainty, reasonable certainty of the Dredge generating revenue during [the repair period] It generated revenue every single year. Why wouldn't it generate revenue during this eight month period, especially recognizing that there is increased demand and reduced supply?" (Tr. 150:2-10 (Rosenfarb).)

96. Mr. Rosenfarb concluded that the Dredge had customers other than the Army Corps. (Tr. 151:2-12 (Rosenfarb).) He testified that because

this is not a Starbucks, the lost profits is even easier to calculate. Because this is a very, very valuable piece of equipment. It has significant efficiency in the marketplace of dredging. It has been utilized almost consistently on an annual basis every year since it was commissioned. It's the unique dredge of its size and ability in the United States. Ever since the 996 sank, it outperforms the 995 and 994, which are the only two dredges which are similar in torque and backhoe capability. And the only two dredges and the

only two companies that compete effectively. And so there are significant opportunities all over the world for a dredge of this capability that requires the dredging of hard surfaces such as hard rock, glacial till and the like...And using the analysis that being laid up for 194 days doesn't generate a dollar of lost revenue is inconceivable under that concept

(Tr. 152:16-25, 153:1-8 (Rosenfarb).)

97. Significant to Mr. Rosenfarb's determination of lost profits, and testimony which the Court found credible and compelling was the robust national and international demand for dredging. (Tr. 155:16-23, 156:13-19 (Rosenfarb).)

98. Whether referred to as a "contribution margin" analysis or a "lost profits" calculation, the methodology is the same (*i.e.* revenue less variable costs).⁶ (Biemeck Aff. ¶¶ 57-58 & n.1; see also Tr. 127:22, 128:4-9 (Rosenfarb).)

⁶ "Contribution margin" is a term used in cost accounting to reflect what is considered gross profit from an accounting standpoint. It is calculated by taking gross revenue and subtracting variable costs (*i.e.* contribution margin = revenue - variable costs). The resulting contribution margin figure represents, in theory, the amount remaining to cover (i) fixed costs (that is, those costs that would not be saved during a period of non-use), and (ii) net profit. Therefore, under cost accounting principles, fixed costs can be subtracted from the contribution margin figure to compute what is called the "net profit margin." In other words, from an accounting standpoint, net profit margin = contribution margin - fixed costs. (Biemeck Aff. ¶ 57 & n.1.)

The term "net profit margin" in accounting parlance is not to be confused with what is described under the law as "net profit." As explained, "net profit" (also called "net earnings") under the law of damages is computed by subtracting variable costs from total revenue. See cases discussed below. In that sense, "net profit" in the legal sense has the same meaning as "contribution margin" in the accounting sense. As such, Great Lakes' use of the phrase "contribution margin" was simply another way to describe the "net profit" analysis required under the law.

99. With its contribution margin analysis, Great Lakes carried out a three-step process to calculate the losses suffered on a per day basis:

- First, Great Lakes calculated the total contribution margin (*i.e.*, revenue less variable costs) for the contracts on which the Dredge was working at the time of the accident (*i.e.*, the Newark Bay and Port Jersey contracts) and for the contract on which the Dredge worked after it was repaired (*i.e.*, the Kill van Kull contract). In other words, Great Lakes calculated the total revenue generated on the three contracts as a whole and reduced that revenue by variable costs as a whole.
- Second, recognizing that different pieces of equipment generate different levels of revenue and involve different levels of expenses, Great Lakes allocated the contribution margin to the individual pieces of equipment that were employed on the projects. More specifically, Great Lakes calculated the amount of contribution margin attributable specifically to the Dredge for those projects.
- Finally, Great Lakes took the stand alone contribution margin attributable to the Dredge and divided it by the total days that the Dredge worked on the project to come up with a daily contribution margin (*e.g.* average daily profit).

(Biemeck Aff. ¶¶ 59-60.)

100. That calculation produced a daily contribution margin (or profit) of \$64,600 per day which was then applied to the 194-day repair period to arrive at a loss of profits in the amount of \$12,532,000. (See Ex. 13; Biemeck Aff. ¶¶ 61-62.)

101. Mr. Rosenfarb testified that if a daily revenue rate were calculated solely based upon the Kill Van Kull contract, it would result in revenues of \$221,000 per day; \$97,000 per day for

the Port Jersey project and \$114,000 for the Newark project. (Tr. 187:2-3 (Rosenfarb).) For the 10-year period that Mr. Rosenfarb examined, he derived an overall revenue rate of \$119,000 and a lost profit rate of \$54,0000. (Tr. 187:24-25, 188:1 (Rosenfarb).) He applied a 92 percent utilization rate. (Tr. 188:22 (Rosenfarb).) Mr. Rosenfarb tested the accuracy of the utilization rate by testing the daily reports relating to actual utilization of the Dredge. (Tr. 193:25, 194:1-12 (Rosenfarb).)

102. Great Lakes also analyzed the lost profits associated with the startup period following the allision-required repairs, during which, as explained above, the Dredge had to be operated at less than full capacity. That analysis, reflected in Trial Exhibit 16, revealed lost contribution margin due to this 24.3 day reduced operation, of \$1,464,175. (Biemeck Aff. ¶¶ 67-69; see also Ex. 16.) This amount was calculated by examining the Dredge's production during the startup period and comparing it to its expected production when dredging at full capacity. During this time, the production achieved was sufficient to cover the Dredge's variable costs and a small portion of its fixed costs. As such, to calculate the appropriate recovery for the startup period, the portion of fixed costs covered by the reduced production/revenue was subtracted from the contribution margin per day. (See Ex. 16.)

103. As a check on the validity of its "contribution margin" (a/k/a "lost profit") analysis, Great Lakes also looked at a ten-year study that examined the profitability of Great Lakes' assets for the years 1997-2006. That ten-year study (*i.e.*, Ex. 14) was prepared in 2007 (well before the allision) and was created for Great Lakes' senior management to use in preparing bids for Great Lakes' dredging fleet. The ten-year study showed that the Dredge had an average contribution margin of \$55,255 per day over the span of its operating history from 1999 to 2006. That this contribution margin was lower than what Great Lakes had computed in quantifying its lost profits was expected because, as noted earlier, the Dredge's demand and utilization was less in 1999-2006 than at the time of the allision and thereafter, due to the presence of a competitor and the lack of the New York Deepening Projects. However, the review of the ten-year study further reinforces that the methodology and the result of Great Lakes' internal lost profits claim analysis are valid. (See Biemeck Aff. ¶¶ 63-66.)

104. Mr. Rosenfarb used the same overall methodology that Great Lakes had used when it initially presented its claim to Defendants (*i.e.*, revenue less avoided variable costs). (Rosenfarb Aff. ¶¶ 56-64.) However, rather than using only the Newark Bay, Port Jersey and Kill van Kull contracts to derive the Dredge's margin, Mr. Rosenfarb examined a much larger

sampling and based his calculations on the average daily contribution margin for the period for when the Dredge was built through March 2010. (Rosenfarb Aff. ¶ 58.)

105. Mr. Rosenfarb concluded that the average daily contribution margin for that period is \$58,843 per day. (Rosenfarb Aff. Ex. 1.1.1.)

106. Mr. Rosenfarb also calculated the revenue lost during the startup period when the Dredge was operated at reduced capacity (including a reduction for startup profits of approximately \$106,000) to approximately \$1.2 million, calculated as approximately \$1.7 million of lost revenues reduced by approximately \$500,000 of avoided costs. (Rosenfarb Aff. ¶ 63, Ex. 1.1.)

107. Mr. Rosenfarb then analyzed what utilization rate for the Dredge might be reasonably anticipated going forward, which, as explained below, is appropriate under the law of damages. Mr. Rosenfarb applied the 92.19 percent utilization rate that was actually achieved between November 2007 and March 31, 2010. (Rosenfarb Aff. ¶¶ 58, 62, Ex. 1.1.2.)

108. Mr. Rosenfarb testified credibly that Great Lakes suffered an actual pecuniary loss as a result of the allision and calculated the amount of lost profits, *i.e.*, the amounts that would have been realized by Great Lakes had there been no

accident. He concluded that the lost profits associated with the repair and startup periods total \$11,736,645, based on:

- \$58,843 per day @ 92.19 percent = \$54,248 x 194 days = approximately \$10.5 million for repair period

plus

- \$54,248 for 24.3 days = \$1.318 million less \$105,633 in startup profits = approximately \$1.2 million for startup period

(Rosenfarb Aff. ¶ 64 & Ex. 1.1.)

109. Chris Gunsten, Great Lakes' main interface with the Army Corps of engineers, testified credibly that the Army Corps has imposed liquidated damages on Great Lakes for late completion of all three contracts (Port Jersey, Newark and Kill Van Kull). (Tr. 196:19-25, 197:1-9 (Gunsten).) In this case, however, Great Lakes is only claiming liquidated damages relating to the Port Jersey contract. (Tr. 198:15-18 (Gunsten).) Mr. Gunsten also testified that while there were delays on the Port Jersey contract unrelated to the allision (see e.g., Tr. 245-246 (Gunsten)), the liquidated damages being sought relate only to the delays due to the allision and resulting repair period. (Tr. 247:15-18 (Gunsten).)

CONCLUSIONS OF LAW

Two legal questions are primarily determinative of plaintiffs' damages claim: (1) as a matter of law, what is the degree of certainty with which plaintiffs must prove their lost

profits?; and (2) For what period of time are lost profits recoverable?⁷ While this Court addresses overhead, liquidated damages and prejudgment interest, those items themselves are dependent on a preliminary finding that there is a cognizable loss of use and a reasonable duration for such loss.

A. General Damage Principles

"Federal maritime law incorporates common law negligence principles generally, and New York law in particular". *Becker v. Poling Transp. Corp.*, 356 F.3d 381, 388 (2d Cir. 2004); see also *M. Golodetz Export Corp. v. S/S Lake Anja*, 751 F.2d 1103, 1112 (2d Cir. 1985) ("The damage rule in admiralty cases generally does not differ from ordinary contract rules.")

Plaintiffs' damages claim is therefore negligence-based, and an award of damages serves a compensatory purpose. The award should be that which is necessary to put plaintiffs in as good a position as they would have been in had the allision not occurred. See, e.g., *Standard Oil Co. of N.J. v. S. Pac. Co.*, 268 U.S. 146, 155 (1925); *Gaines Towing & Transp. Co. v.*

⁷ This Court, sitting in admiralty, has equitable powers and can award what is fair to avoid injustice. See, e.g., *Standard Oil Co. v. S. Pac. Co.*, 268 U.S. 146, 156 (1925) ("It is not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts."); *Montauk Oil Transp. Corp. v. Sonat Marine, Inc.*, 871 F.2d 1169, 1172 (2d Cir. 1989); *Pizani v. M/V Cotton Blossom*, 669 F.2d 1084, 1089 (5th Cir. 1982) (finding that a federal court sitting in admiralty has equitable powers--i.e., common law did not control); *Gateway W. Ry. Co. v. Am. River Transp. Co.*, 887 F.Supp. 201, 202 (C.D. Ill. 1995) ("[A] court sitting in admiralty is privileged to exercise flexibility and award what is fair").

Atlantia Tanker Corp., 191 F.3d 633, 635 (5th Cir. 2000) (the first principle in assessing damage for maritime tort is to place the injured person as nearly as possible in the condition he would have been in had the damage not occurred). Plaintiffs are entitled to recover reasonable physical and economic damages that are a direct and foreseeable result of the allision. See *Marathon Pipeline Co. v. D/R Rowan/Odessa*, 761 F.2d 229, 233 (5th Cir. 1985); *Mecom v. Levingston Shipbuilding Co.*, 622 F.2d 1209, 1213-15 (5th Cir. 1988).

While plaintiffs' damages must be proven with "reasonable certainty," mathematical precision is not required and reasonable approximations will suffice. See, e.g., *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U.S. 555, 563 (1931) ("it will be enough if the evidence shows the extent of the damages as a matter of just and reasonable inference, although the result be only approximate"); *United Transp. Co. v. Berwind-White Coal-Mining Co.*, 13 F.2d 282, 283 (2d Cir. 1926) (noting that "approximate accuracy is all that can be reasonably expected"). Defendants bear whatever inconvenience or hardship there may be in proving the exact amount of damages sustained. See *The Mason*, 249 F. 718, 720 (2d Cir. 1918); *United Transp.*, 13 F.2d at 284 ("the inaccuracy must be plain, and plainly injurious, to move any court in favor of the original wrongdoer").

Additionally, although plaintiffs bear the initial burden of proving damages sustained, the burden then shifts to defendants to show the unreasonableness of the claimed damages. *See Cape Bille Ship. Co. v. Tug Judy Moran*, 2007 A.M.C. 2369, 2378 (S.D.N.Y. 2007) (the burden to show a failure by the vessel owner to mitigate damages and that common charges incurred during a repair period are unrecoverable is on the wrongdoer) (citing *Continental Sweden Corp. v. MP Howlett, Inc.*, 719 F. Supp. 1202, 1210 (S.D.N.Y. 1989)); *In re Silver Line Ltd.*, 1937 A.M.C. 498, 501 (N.D. Cal. 1937) (citing *The Ruthie*, 4 F. Supp. 317, 318 (D.N.Y. 1933)); *see also Fed. Ins. Co. v. Sabine Towing & Transp. Co.*, 783 F.2d 347, 350 (2d Cir. 1986) ("The burden of showing that a plaintiff unreasonably failed to minimize damages rests with the wrongdoer.").

1. Elements of Loss of Use Claim

"That the loss of profits or the use of a vessel pending repairs, or other detention, arising from a collision or other maritime tort, and commonly spoken of as "demurrage" is a proper element of damage, is too well settled both in England and America to be open to question." *The Conqueror*, 166 U.S. 110, 125 (1897).⁸ In *The Potomac*, 105 U.S. 630 (1881), the Supreme

⁸ Damages for lost profits arising from the loss of use of a damaged vessel "has traditionally been called detention" and is also sometimes referred to as "demurrage." *See Bolivar County Gravel Co. Inc. v. Thomas Marine Co.*, 585

Court described the rules of law applicable to such a claim as follows:

In order to make full compensation and indemnity for what has been lost by the collision, *restitutio in integrum*, the owners of the injured vessel are entitled to recover for the loss of her use, while laid up for repairs. When there is a market price for such use, that price is the test of the sum to be recovered. When there is no market price, evidence of the profits that she would have earned if not disabled is competent; but from the gross freight must be deducted so much as would in ordinary cases be disbursed on account of her expenses in earning it; in no event can more than the net profits be recovered by way of damages; and the burden is upon the libellant to prove the extent of the damages actually sustained by him.

Id. at 631-32.

In *The Conqueror*, 166 U.S. 110, the Supreme Court stated that to recover loss of use damages, "[t]here must be a pecuniary loss, or at least, a reasonable certainty of pecuniary loss, and not a mere inconvenience arising from an inability to use the vessel" *Id.* at 133. Such damages "will only be allowed when profits have actually been, or *may be reasonably supposed to have been*, lost, and the amount of such profits is proven with reasonable certainty." *Id.* at 125 (emphasis added); see also *Conagra, Inc. v. Inland River Towing Co.*, 252 F.3d 979, 983 (8th Cir. 2001).

F.2d 1306, 1308 n.2 (5th Cir. 1978); Nicholas J. Healy, *The Law of Marine Collision* 362 (1998).

Under Second Circuit precedent, it is not necessary that plaintiffs prove that they lost or turned down a specific contract or contracts while the Dredge was under repair. See *The James McWilliams*, 42 F.2d 130, 132 (2d Cir. 1930); *Weeks Dredging & Contracting, Inc. v. B. Turecamo Towing Corp.*, 482 F. Supp. 1053, 1058-59 ("Weeks Dredging") (E.D.N.Y. 1980) (the test is not whether specific contracts were lost, but whether profits more probably than not would have been earned had the accident not occurred); see also *Maritrans Operating Partners LP v. Port of Pascagoula*, 73 Fed. Appx. 733, 734 (5th Cir. 2003) (to recover lost profits, the "shipowner is not required to prove that it lost particular charters because its vessel was out of service"); *Conagra, Inc.*, 252 F.3d 979; *In re Nicole Trahan*, 10 F.3d 1190 (5th Cir. 1994).

Moreover, and as is the case here, plaintiffs need not have lost any profits on the contracts they were performing at the time of the casualty to recover loss of use damages. See *Moore-McCormack Lines, Inc. v. The Esso Camden*, 244 F.2d 198 (2d Cir.), cert. denied, 355 U.S. 822 (1957).

Plaintiffs have made the necessary showing that the Dredge was engaged in an active market before and after the repairs. See *Moore-McCormack*, 244 F.2d at 201 (noting that because the vessel was "active in a ready market at the time of the collision," the vessel-owner is entitled for damages equal to

the vessel's loss of potential earnings); see also *In re Nicole Trahan*, 10 F.3d 1190 (5th Cir. 1994) (there is no need for proof of a particular lost opportunity where there is an active market for a vessel such that profits may be reasonably supposed to have been lost); *Delta S.S. Lines, Inc. v. Avondale Shipyards, Inc.*, 747 F.2d 995, 1001 (5th Cir. 1984) (the test usually involves a showing that the vessel "has been engaged, or was capable of being engaged in a profitable commerce"); *Maritrans Operating Partners*, 73 Fed. Appx. at 734 ("Uncontroverted proof that the shipowner's vessel operated in an active market is sufficient to establish lost profits."). The testimony of both Messrs. Biemeck and Rosenfarb is clear on that point.

2. Proving lost profits with "reasonable certainty"

While it is clear that proving lost profits requires, in turn, proving that such profits were lost with some degree of "reasonable certainty," the law is well-settled that absolute certainty or mathematical precision is not required. See *Marine Transp. Lines v. M/V Tako Invader*, 37 F.3d 1138, 1140 (5th Cir. 1994). What constitutes "reasonable certainty" is a fact-specific inquiry, assessed on a case-by-case basis. *Yarmouth Sea Prods. Ltd. v. Scully*, 1998 A.M.C. 825 (4th Cir. 1997). The Court finds that the utilization rate for the Dredge before and after the allision, combined with ample and

uncontroverted evidence of robust market demand, as discussed above, easily meets the required degree of certainty.

Any award of lost profits necessarily includes some element of speculation because "any decision as to what events would have occurred in the absence of the [allision] and the detention for repairs involves a supposition based on inferences from events which did not occur. No such supposition can be certain." *Weeks Dredging*, 482 F.Supp. at 1058. As a general matter, therefore, some uncertainty in the calculation of damages does not bar an award, and when the existence of damage is certain, and the only uncertainty is amount, the plaintiff will not be denied a recovery of even substantial damages. See *Contemporary Mission, Inc. v. Famous Music Corp.*, 557 F.2d 918, 926 (2d Cir. 1977) (New York law).

As recognized by the Eighth Circuit in discussing loss of use damages,

the plaintiff must present proof sufficient to bring the issue outside the realm of conjecture, speculation or opinion unfounded on definite facts. As an element of recoverable damages, the sufficiency of the evidence of lost profits is dependent upon whether the financial information contained in the record is such that a just or reasonable estimate can be drawn.

Conagra, 252 F.3d at 983.

Here, the factually-supported financial data, fact testimony, and expert opinions, taken together, satisfy the "reasonable certainty" standard. See *Mon River Towing, Inc. v.*

Indus. Terminal & Salvage Co., No. 06-1499, 2009 U.S. Dist. LEXIS 112833, at *11-12 (W.D. Pa. Dec. 4, 2009) (explaining that "reasonable certainty" requires proof of the values asserted "by factually-supported, not merely speculative evidence of the income and costs normally attributable to the damaged vessels, [which] must be arrived at by application of reliable principles and methods of accounting"); see also Restatement (Second) of Contracts §352 cmt. a (explaining that the "reasonable certainty" standard can be met with proof of sophisticated economic and financial data and by expert opinion).

B. Methodology for Computing Loss of Use Damages: "Net Profit"

Courts have wide discretion in determining the measure for computing loss of use damages. *Brooklyn Eastern District Terminal v. U.S.*, 287 U.S. 170, 174, 176 (1932) (confirming that courts are to consider the particular circumstances of each case, and that the measure of reparation can vary depending on those circumstances).

In *The Conqueror*, the Supreme Court identified two measures for demonstrating loss of use profits:

The best evidence of damage suffered by detention is the sum for which vessels of the same size and class can be chartered in the market [the so-called 'market use' method]. Obviously, however, this criterion cannot be often applied, as it is only in the larger ports that there can be said to be a market price for the use of vessels, particularly if there be any peculiarity

in their construction which limits their employment to a single purpose.

In the absence of such market value, the value of her use to her owner in the business in which she was engaged at the time of the collision is a proper basis for estimating damages for detention, and the books of the owner showing her earnings about the time of her collision are competent evidence of her probable earnings during the time of her detention [the so-called 'value of use' method].

166 U.S. at 127; see also *Mon River Towing, Inc.*, 2009 U.S. Dist. LEXIS 112833, at *11-12 (explaining that the amount of loss can be shown either through (a) market value or (b) value of use).

In cases involving the "value of use" method, loss of use damages are based on "the amount the vessel would have earned in the business in which she has customarily been employed." *Moore-McCormack Lines*, 244 F.2d at 201. The Court performed that calculation here.

1. Relevant time period for assessing net profit

In determining the Dredge's earnings "in the business in which she has customarily been employed," this Court has not-- and legally should not--base its findings on the single contract the Dredge was performing at the time of the allision. *The James McWilliams*, 42 F.2d 130, 133 (2d Cir. 1930). Rather, this Court must calculate the Dredge's earnings over a period of time prior to the allision and for some period post-repair when the

Dredge was back in service. See 2 Thomas Schoenbaum, *Admiralty & Maritime Law* § 14-6 at 119-20 (4th ed. 2004) (collecting cases); see also *Moore-McCormack*, 244 F.2d 198 (analyzing earnings from three voyages); *Delta S.S. Lines*, 747 F.2d at 1002 (noting that detention can be calculated based on number of days ship out of service multiplied by average daily lost profit).

Courts frequently look to the daily average earnings from the pre-collision, collision, and post-collision voyages in computing loss of use damages in what has become known as the "three-voyage rule." *The Gylfe v. The Trujillo*, 209 F.2d 386, 388-89 (2d Cir. 1954); *Moore-McCormack*, 244 F.2d 198 (applying the "three-voyage rule"). The Second Circuit has, however, admonished that the "three-voyage" rule "is not a rule of thumb to be invariably applied." *The Gylfe*, 209 F.2d at 389.

Depending on the circumstances, the earnings from other time periods may also be used to calculate the amount of lost profits to be awarded for loss of use. See, e.g., *Moore-McCormack Lines, Inc.*, 244 F.2d 198 (applying the three-voyage rule, but noting that the vessel's earnings over a longer period of time could also be relevant); *Dahlia Maritime Co. v. M/S Nordic Challenger*, 1994 A.M.C. 2208 (E.D. La. 1993) (applying a "four-voyage rule" in which the profits from the two voyages before and the two voyages after the collision were considered the fair measure of lost profits); *Conagra*, 252 F.3d

at 985 (utilizing average fleet wide net barge earnings per day); *Furlough, Inc. v. U.S.*, 1983 A.M.C. 2350 (E.D. Val. 1981); (considering earnings from nine months before and nine months after casualty); *Weeks Dredging*, 482 F.Supp. at 1059-60. In any scenario (using the three-voyage rule or otherwise), the "earnings" that are to be awarded correspond to lost "net profits." *The Potomac*, 105 U.S. at 631-32 (confirming "net profit" as the sum to be awarded).

For purposes of calculating loss of use damages, "net profits" are computed by taking gross revenue and subtracting costs that were saved while the Dredge was out of service (*i.e.*, variable costs such as fuel, etc.). See *id.* (explaining that from gross revenue, expenses ordinarily incurred in performing are to be subtracted); *Marine Transp. Lines*, 37 F.3d at 1141 (explaining that variable costs must be deducted from gross revenue in computing earnings for loss of use analysis); *Skou v. U.S.*, 478 F.2d 343, 347-348 (5th Cir. 1973) (ordinary operating expenses are to be deducted from gross revenue); *Kim Crest, S.A. v. M.V. Sverdlovsk*, 753 F. Supp. 642, 650 (S.D. Tex. 1990) ("the cost saved by not having to perform the charters only includes the variable cost"). Here, both Great Lakes and Mr. Rosenfarb employed the appropriate methodology to calculate net profits.

2. Reasonable Repair Period

Once this Court has determined, as it has, that an award of lost profits is appropriate, the next issue it must consider is the appropriate time period for which damages should be awarded. That requires two separate findings: was 194 days a reasonable repair period (and was the 24 day start-up period reasonable)?, and how much would the Dredge have been utilized during that period of time? See *Marine Transport Lines*, 37 F.3d at 1140-41 (calculation of loss of profits involves consideration of the rate of profit per day, the reasonable period of detention, and utilization); *Tidewater Marine v. Sanco Int'l Inc.*, 113 F. Supp. 2d 987 (E.D. La. 2000) (same); *Weeks Dredging*, 482 F.Supp. at 1058 (examining utilization).

Loss of use damages are not awardable for any detention period beyond that which the repairs "reasonably" could have been completed, but in examining the period of repair, the Court is mindful that "[t]he time periods for construction or repair work are so difficult to control that delays in the completion of repair work should be treated as part of the risks which the tortfeasor assumes." *Reliable Transfer Co., Inc. v. U.S.A.*, 1973 A.M.C. 930, 937 (E.D.N.Y. 1973), *aff'd*, 497 F.2d 1036 (2d Cir. 1974), *vacated on other grounds and remanded*, 421 U.S. 397 (1975).

Further, the applicable standard for judging an injured party's conduct with regard to damages (and hence the party's repair choices) is whether his decision falls within the range of reason, not whether he has chosen the most prudent course of action. *Ellerman Lines, Ltd. v. The President Harding*, 288 F.2d 288, 290 (2d Cir. 1961).

Where the necessity for making a decision in regards to repairs following a casualty has been thrust upon an injured party by a party at fault, the courts "do not require infallibility or exactness of mathematical formula," and the injured party is allowed a wide latitude in determining how best to deal with the situation." *Mecom v. Levingston Shipbuilding Co.*, 622 F.2d 1209, 1213-15 (5th Cir. 1988) (quotation marks omitted).

As long as the injured party acts reasonably with regard to the repairs, it is entitled to full recovery for the period of repairs. *Ellerman Lines, Ltd.*, 288 F.2d at 290. Further:

[A]bsent evidence of any culpable delay in the completion of repairs, defendants cannot hold the plaintiff liable for the fact that the work took longer to complete than the surveyors estimated at the outset. The time periods for construction or repair work are so difficult to control that delays in the completion of repair work should be treated as part of the risks which the tortfeasor assumes.

Standard Marine Towing Services, Inc. v. M.T. Dua Mar, 708 F. Supp. 562, 567 (S.D.N.Y. 1989) (quotation marks omitted). As

long as the injured party acts reasonably with regard to the repairs, it is entitled to recover fully from the tortfeasor. . . . The burden to show the failure to mitigate is on the wrongdoer." *Marine Office of Am. Corp. v. M/V Vulcan*, 891 F. Supp. 278, 286-287 (E.D. La. 1995) (citing *Marathon Pipe Line Co. v. Drilling Rig Rowan/Odessa*, 761 F.2d 229, 233 (5th Cir. 1985)); *Continental Sweden Corp. v. MP Howlett, Inc.*, 719 F. Supp. 1202, 1210 (S.D.N.Y. 1989)).

In addition, that the injured party elects to conduct so-called "owner's work" (*i.e.*, repairs unrelated to the casualty) does not bar the ability to recover loss of use damages, as the Second Circuit has confirmed that loss of use damages are recoverable for the time attributable to the casualty-related repairs even if owners work was performed simultaneously. *Bouchard Transp. Co., Inc. v. The Tug Ocean Prince*, 691 F.2d 609 (2d Cir. 1982); *Compania Pelineon De Navegacion, S.A. v. Texas Petroleum Co.*, 540 F.2d 53, 56 (2d Cir. 1976); *Demetrius Maritime Co., Ltd. v. The Connecticut*, 463 F.Supp. 1108 (S.D.N.Y. 1979).

Here, the evidence is strongly supportive of the Court's findings that the 194 day repair period and the 24 day start-up period were reasonable. While it may be that the repairs could have been conducted more quickly as defendants' experts opined, that is not the required legal standard. The standard is, as

set forth above, "reasonableness." This Court finds that based upon the credible testimony of the experienced individuals who oversaw and reviewed the repairs, that the time period was reasonable.⁹

3. Utilization

Having determined that the repair period of 194 days plus a 24 day start up period was reasonable, this Court turns to the final question: how much would the Dredge have been utilized during that time? As a matter of law, utilization of the vessel is the estimated percentage of time that the vessel would have worked during the period it was out of service. *Tidewater Marine*, 113 F. Supp. 2d at 1007; see also *Weeks Dredging*, 482 F.Supp. at 1058-59. Utilization need not be proven with exact precision, and evidence of relevant market activity, use of other vessels, and the historical utilization of the vessel at issue are used by courts in analyzing this factor. See *Tidewater Marine*, 113 F. Supp. 2d at 1007 (finding that it is reasonable to calculate utilization by looking at historical utilization of five comparable vessels during three years prior

⁹ Entitlement to damages when owner's work is conducted at the same time as casualty-related repairs turns on whether the vessel was in need of immediate repair following the allision. "If . . . collision repairs are immediately necessary, the owner may conduct his own repairs at the same time, and is entitled to an award of detention for the period common to both the collision and owner's repairs. *Bouchard Transp.*, 691 F.2d at 612-13. The testimony at trial, which, as discussed above, this Court credits, is that the repairs that were performed during the repair period but that were not attributable to the allision, did not prolong the repair period.

to casualty and the remaining four after the sinking); *Weeks Dredging*, 482 F.Supp. at 1058-59.

Here, there was credible testimony that demand for the Dredge's unique capabilities was increasing and there was robust national and international demand. There was also credibly testimony that competition for the Dredge had declined once the TAURACAVOR was lost at sea. There was credible testimony that had the allision not occurred the Dredge would have finished the Newark, Port Jersey, and Kill Van Kull contracts earlier and gone on to other work. But there was also testimony that for certain periods, the Dredge has to go through scheduled maintenance and did, in fact, have several periods when it went into dry dock after the repair period resulting from the allision. Taken together, this Court finds that the utilization rate of 92 percent as put forward by plaintiffs and as tested by Mr. Rosenfarb is reasonable. The Court has examined the utilization rate put forward by Mr. Magnan and finds that it excludes certain contracts (e.g., Kill Van Kull) and also does not account for increased utilization rates since 2007. The Court therefore declines to credit Mr. Magnan's utilization rate.

C. Liquidated Damages

Plaintiffs seek \$1,331,070 in reimbursement for liquidated damages relating to the Port Jersey contract. This Court finds

that plaintiffs did not prove by a preponderance of the evidence that ultimately some or all of it might not be recovered from the Army Corps of Engineers through the appeal process. While this Court accepts that the Port Jersey contract would have been completed faster but for the allision, there was no evidence before the Court that there has been a final determination of this matter. Accordingly, to avoid risk of duplicative recovery, this Court declines to grant an award of liquidated damages.

D. Overhead

Almost nothing was said at trial regarding recoverable overhead. This Court does not believe that plaintiffs proved by a preponderance of the evidence what overhead they should recover. Accordingly, this Court declines to award an amount for overhead.

E. Prejudgment Interest

Prejudgment interest is normally awarded in maritime cases. *City of Milwaukee v. Cement Div., Nat. Gypsum Co.*, 515 U.S. 189, 195 (1995). Granting of pre-judgment interest is, in fact, the rule rather than the exception. *See, e.g., Corpus Christi Oil & Gas Co. v. Zapata Gulf Marine Corp.*, 71 F.3d 198, 204 (5th Cir. 1995); *Hygrade Operators v. Clifford*, 2000 A.M.C. 1732, 1735-36 (S.D.N.Y. 2000). An award of prejudgment interest "ensure[s] that an injured party is *fully compensated for its loss.*" *City of Milwaukee*, 515 U.S. at 195 (emphasis added).

The rate of interest to be applied is a matter within this Court's discretion, as is the date when interest accrues, and whether interest is to be compounded. See, e.g., *Mentor Ins. Co. v. Brannkasse*, 996 F.2d 506, 520 (2d Cir. 1993); *Ameejee Valleejee and Sons v. M/V Victoria U.*, 661 F.2d 310, 313 (4th Cir. 1981). The Second Circuit does not prescribe any particular rate of prejudgment interest, see *Mentor Ins. Co.*, 996 F.2d at 520, and cases in the Second Circuit have established the clear rule that the Court is not limited to any one particular standard when exercising its discretion in setting the rate of interest. See *id.* (stating that interest can be awarded at "the cost of borrowing money, if measured for example by the average prime rate or adjusted prime rate rather than by actually paid rates."); *Nittetsu Shoji America, Inc. v. M.V. Crystal King*, No. 90 Civ. 2082, 1992 U.S. Dist. LEXIS 7615, at *43-45 (S.D.N.Y. May 21, 1992) (stating that, with respect to calculating the rate of prejudgment interest, "[s]everal standards have been utilized" within the Second Circuit); see also *Ingersoll Milling Mach. Co. v. M/V Bodena*, 829 F.2d 293, 311 (2d Cir. 1987) (noting that "the rate of interest used in awarding prejudgment interest rests within the sound discretion of the trial court" and upholding the trial court's determination of using a range of Treasury Bill rates, from 9.676 percent to 10.112 percent, to calculate prejudgment

interest), *cert. denied*, 484 U.S. 1042 (1988); *Independent Bulk Trans. v. Vessel Morania Abaco*, 676 F.2d 23, 27 (2d Cir. 1982) (applying the prevailing interest rate of 12 percent for prejudgment interest); *Bally, Inc. v. M.V. Zim America*, No. 91 Civ. 5501, 1993 U.S. Dist. LEXIS 926, at *23 (S.D.N.Y. Feb. 1, 1993) (using the average prime rate of the prior three years--i.e., 8 percent--to calculate prejudgment interest), *rev'd on other grounds*, 22 F.3d 65 (2d Cir. 1994); *Nat'l Starch & Chem. Co. v. M/V Monchegorsk*, No. 97-1448, 2000 U.S. Dist. LEXIS 11209, at *26 (S.D.N.Y. Aug. 7, 2000) (applying a prime rate of 7.25 percent for prejudgment interest, adjusted for the dramatic rise in interest rates at the time).

One source for setting the prejudgment interest rate is the statutory rate in the forum state. *Randolph v. Laeisz*, 896 F.2d 964, 969 (5th Cir. 1990) (approving the trial court's discretion to award "prejudgment interest rate of the state in which the court sits"); *Marine Overseas Services, Inc. v. Crossocean Shipping Co., Inc.*, 791 F.2d 1227, 1236 (5th Cir. 1986) (admiralty courts setting prejudgment interest rates have "broad discretion and may look to state law or other reasonable guideposts indicating a fair level of compensation"); *United States v. MN Zoe Colocotroni*, 602 F.2d 12, 14 (1st Cir. 1979); *Evans v. Nantucket Community Sailing, Inc.*, 582 F. Supp. 2d 121

(D. Mass. 2008) (awarding Massachusetts statutory rate of 12 percent).

Another source for setting the rate is average prime rate or adjusted prime rate. *Mentor*, 996 F.2d at 520 (citing *Bally, Inc.*, 1993 U.S. Dist. LEXIS 926, at *23 (prejudgment interest award measured by prime rate); *Ins. Co. of N. Am. v. S.S. Globe Nova*, 638 F. Supp. 1413, 1425 (S.D.N.Y. 1986), *rev'd on other grounds*, 820 F.2d 546 (2d Cir.), *cert. denied*, 484 U.S. 965 (1987); *In re Delphinus Maritima, S.A.*, 1982 A.M.C. 796, 812 (S.D.N.Y. 1982); *see also BP Exploration & Oil, Inc. v. Moran Mid-Atlantic Corp.*, 147 F. Supp. 2d 333 (D.N.J. 2001) (interest compounded at the prime rate average over the period of the loss is appropriate in a maritime collision case); *City of Chicago v. M/V Morgan*, 248 F. Supp. 2d 759 (N.D. Ill. 2003) (finding that prejudgment interest should be calculated at the prime rate because that calculation of prejudgment interest fully compensates the injured party).

Some cases have looked to the yield on short-term U.S. Treasury Bills, as an appropriate gauge by which to award a plaintiff prejudgment interest. *See, e.g., McCrann v. United States Lines, Inc.*, 803 F.2d 771, 774 (2d Cir. 1986) (using the average interest rate paid on six-month Treasury Bills from November 29, 1979 to February 1, 1986, or 10.397 percent). Significantly, in *McCrann*, however, the prime rate during the

relevant period ranged from 11.50 percent to 21.50 percent with the average T-bill rate being 10.397. Here, given artificially low T-bill rates for the past period, an award of prejudgment interest at that rate would not be adequate.

Great Lakes was forced to borrow against a line of credit as a result of the allision at an average interest rate of 3.61 percent (compounded monthly), and in fact, borrowed funds to pay for some of the repair work necessitated by Defendants' conduct. Additionally, Great Lakes' weighted average cost of capital during the relevant time was between 8.5 percent and 9.4 percent.

The average prime rate from January 24, 2008, to January 12, 2012, is 3.66 percent, based upon the following prime rates that were in effect from the date of the allision (*i.e.*, January 24, 2008):

<u>Date of Rate Change</u>	<u>Rate</u>
January 22, 2008	6.50 percent
January 30, 2008	6.00 percent
March 18, 2008	5.25 percent
April 30, 2008	5.00 percent
October 8, 2008	4.50 percent
October 29, 2008	4.00 percent
<u>December 16, 2008 - present</u>	<u>3.25 percent</u>

See Prime Rate Interest History, <http://www.wsjprimerate.us> (last visited Mar. 1, 2012).¹⁰

The Court awards plaintiffs prejudgment interest at the average prime interest rate--i.e., 3.66 percent--from the date the Dredge was back in productive use until the date of payment, without compounding.¹¹

CONCLUSION

For the reasons set forth above, this Court awards plaintiffs loss of use damages in the amount of \$11,736,645 and prejudgment interest calculated as set forth above, without any compounding.

The Clerk of Court is directed to enter judgment in favor of plaintiffs in the amount of \$11,736,645 along with prejudgment interest of 3.66 percent beginning to run from the date the Dredge was back in productive use.

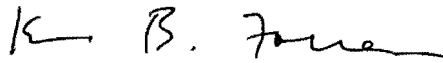
¹⁰ The 3.25 percent prime rate is the current U.S. prime rate from that date to the present. Prime Rate Interest History, <http://www.wsjprimerate.us> (last visited March 1, 2012).

¹¹ Interest from the date of the allusion would be unfair since the lost profits accrued gradually over time. Based upon all of the circumstances herein, the Court believes that it is appropriate to impose interest that runs from the date upon which the entire sum of lost profits would have accrued.

The Clerk of Court is further directed to terminate this action.

SO ORDERED.

Dated: New York, New York
March 2, 2012



KATHERINE B. FORREST
United States District Judge